

# KIC 006779726

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_{\star}$ ( $R_{\odot}$ )	$T_{\star}$ (K)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006779726-01	OBS	3375.01	47.056397	173.963807	744.3	4.877	14.1	14.9	0.92	5889	2.69	14.46

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006779726-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006779726-01

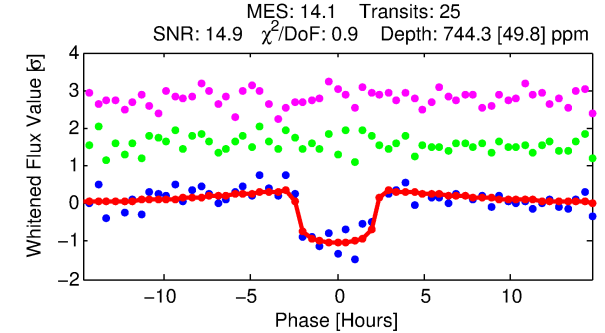
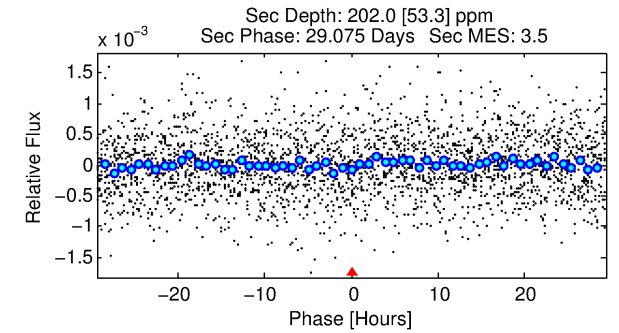
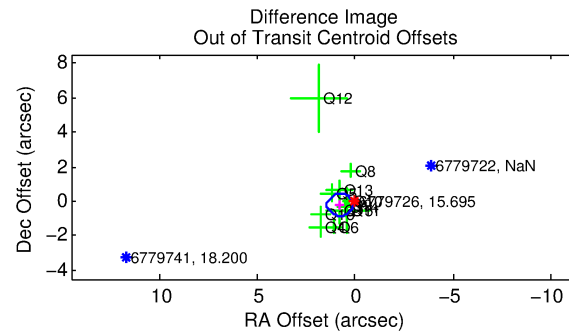
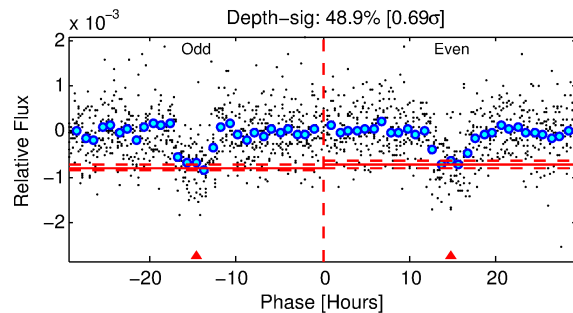
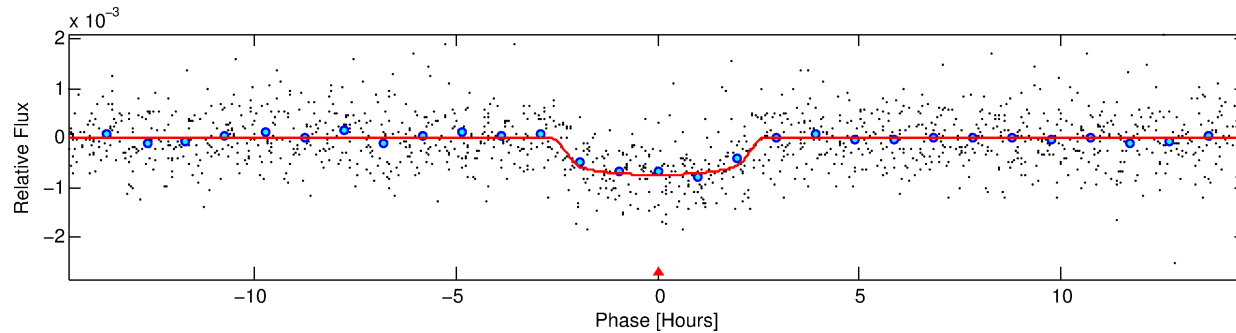
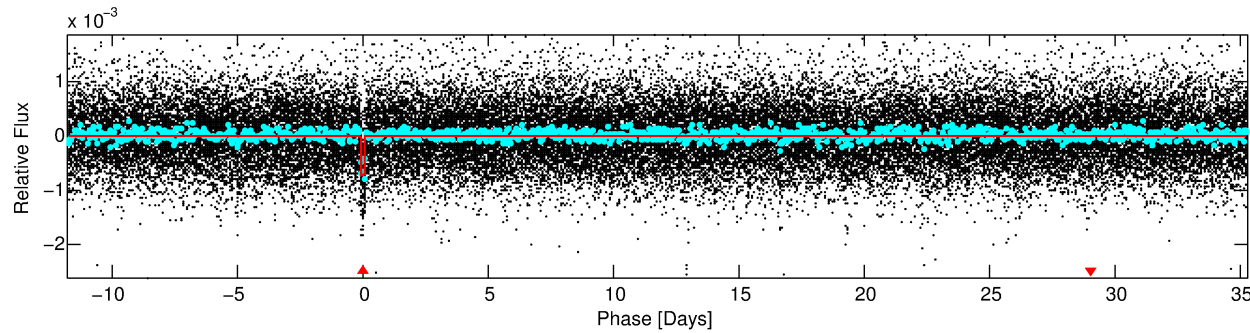
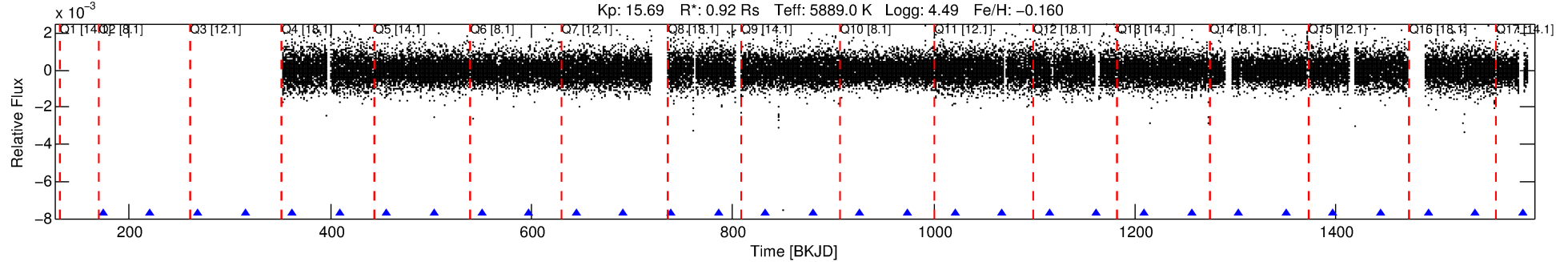
No Significant Match Found

# DV One-Page Summary

KIC: 6779726 Candidate: 1 of 1 Period: 47.056 d

KOI: K03375.01 Corr: 0.993

Kp: 15.69 R\*: 0.92 Rs Teff: 5889.0 K Logg: 4.49 Fe/H: -0.160



## DV Fit Results:

Period = 47.05640 [0.00037] d  
Epoch = 173.9638 [0.0066] BKJD  
Rp/R\* = 0.0267 [0.0110]  
a/R\* = 55.39 [104.95]  
b = 0.70 [1.40]  
Seff = 14.45 [5.76]  
Teq = 497 [50] K  
Rp = 2.69 [1.35] Re  
a = 0.2523 [0.0633] AU  
Ag = 975.36 [916.13] [1.06σ]  
Teffp = 4296 [938] K [4.05σ]

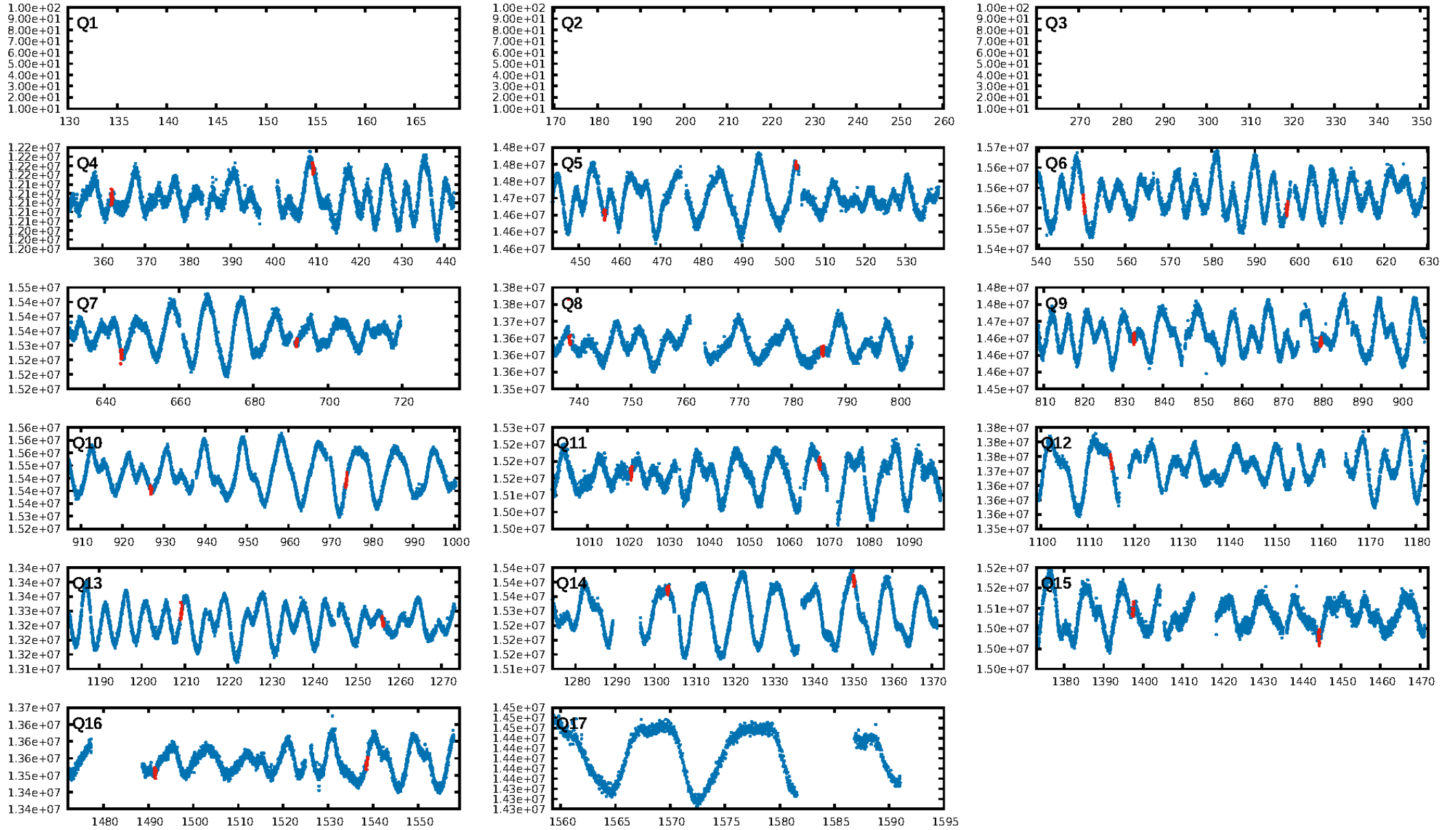
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 82.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 1.37e-28  
RollingBand-fgt: 1.00 [25/25]  
**GhostDiagnostic-chr: 0.817**  
Centroid-sig: 30.2%  
Centroid-so: 0.129 arcsec [0.16σ]  
**OotOffset-rm: 0.799 arcsec [3.73σ]**  
KicOffset-rm: 0.241 arcsec [1.13σ]  
OotOffset-st: 3/2/4/3 [12]  
KicOffset-st: 3/2/4/3 [12]  
DiffImageQuality-fgm: 0.75 [9/12]  
DiffImageOverlap-fno: 1.00 [12/12]

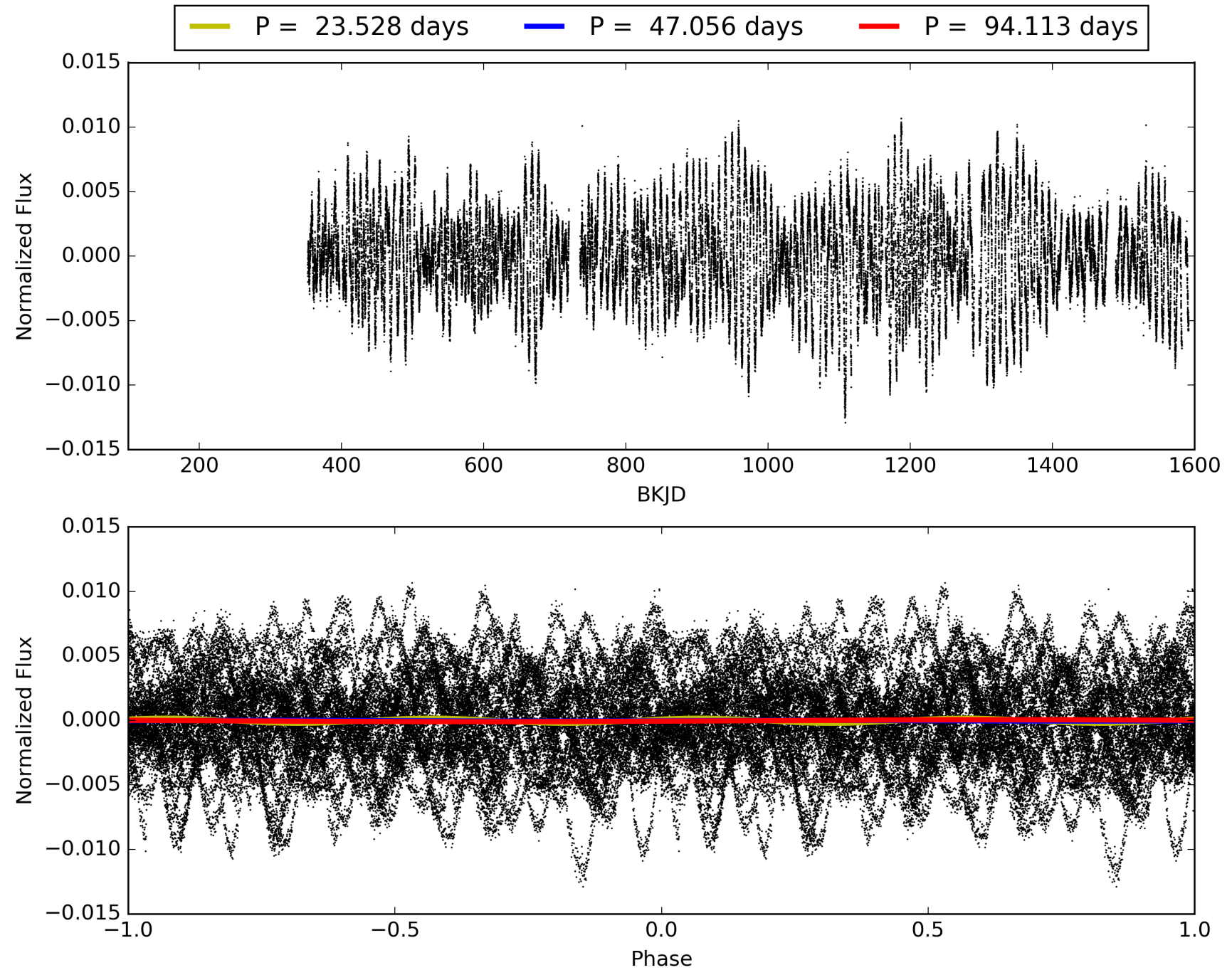
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:50:45 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006779726-01, PDC Light Curves

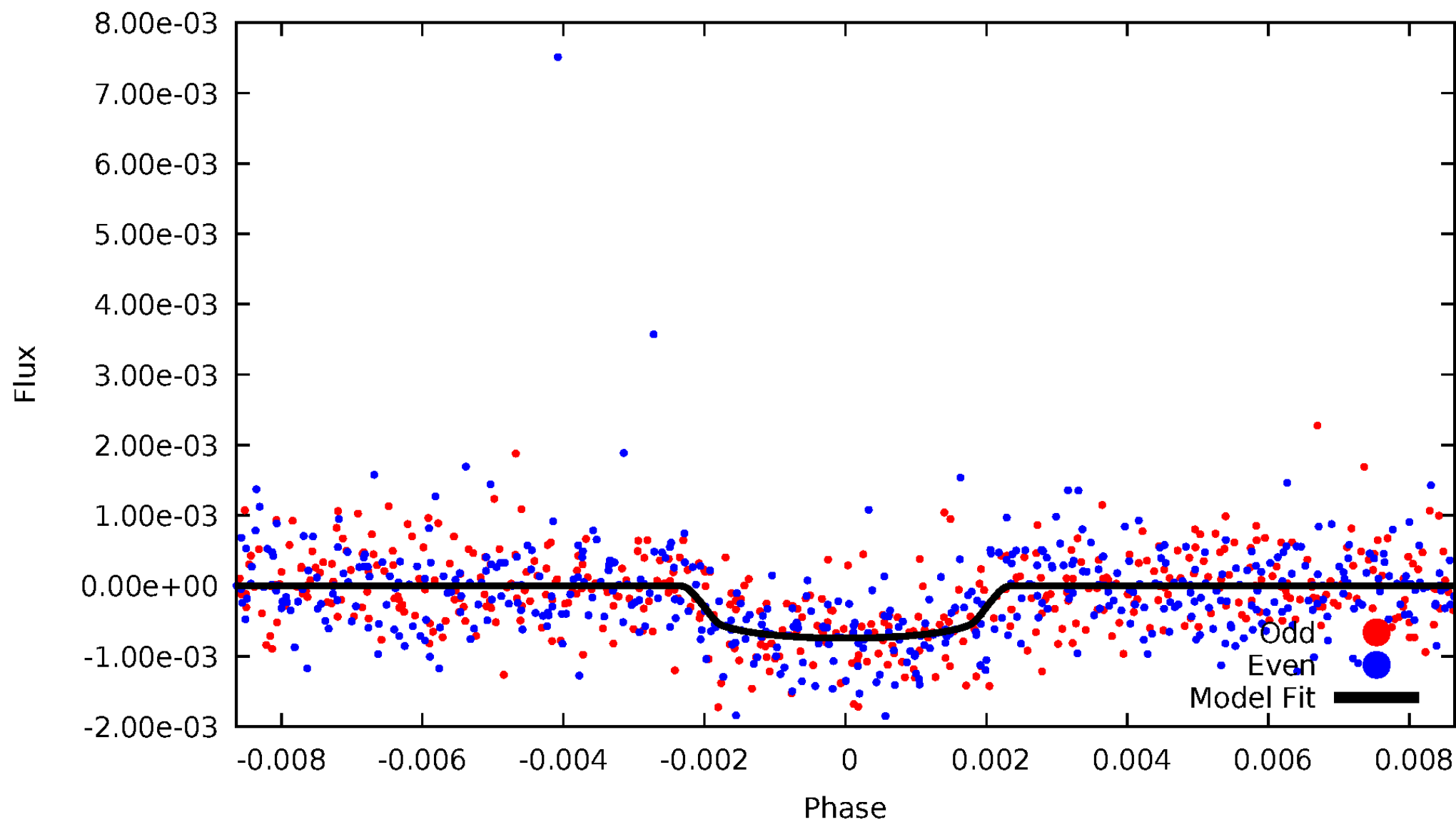


# TCE 006779726-01



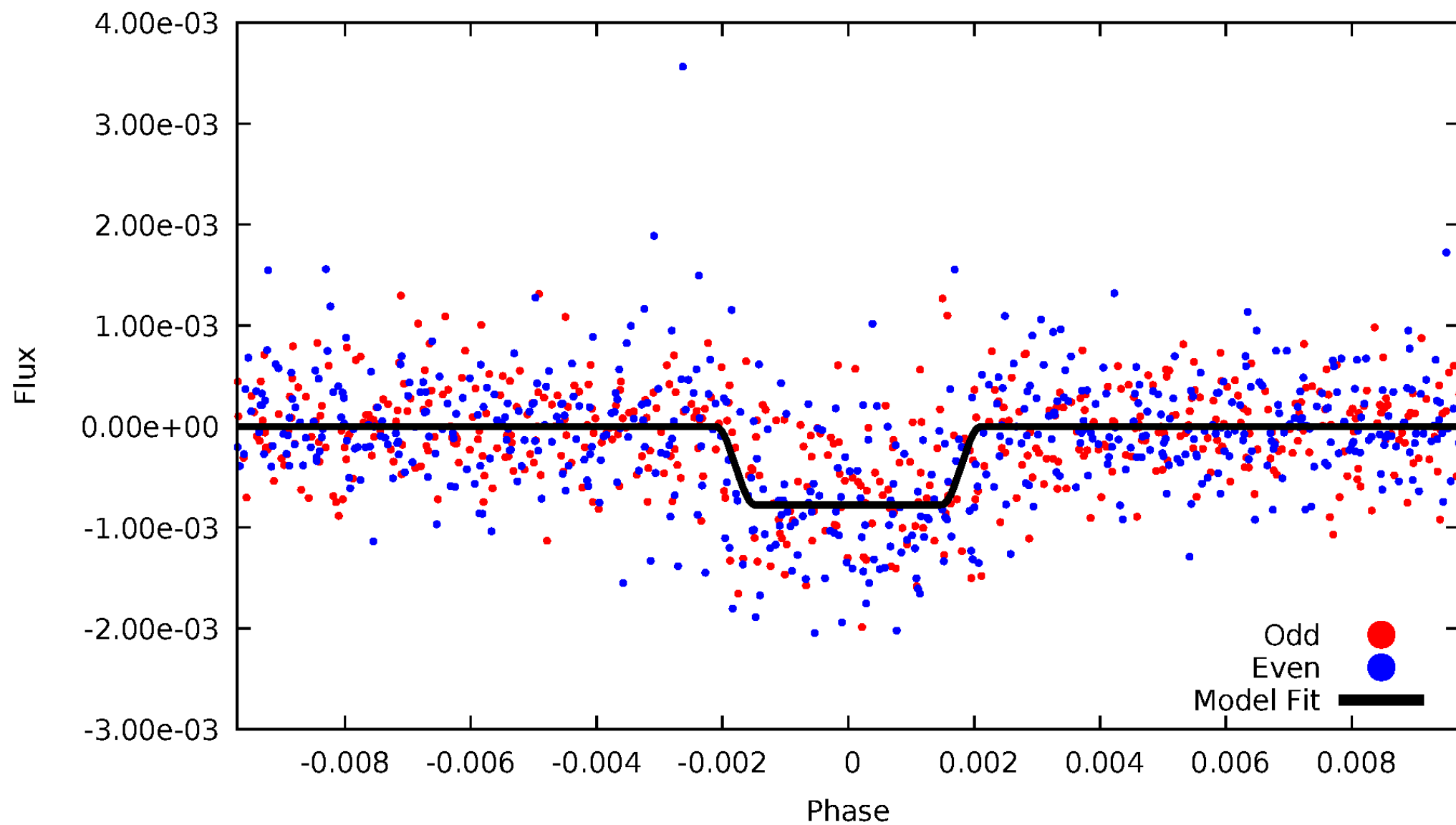
# DV Odd/Even

TCE 006779726-01



# ALT Odd/Even

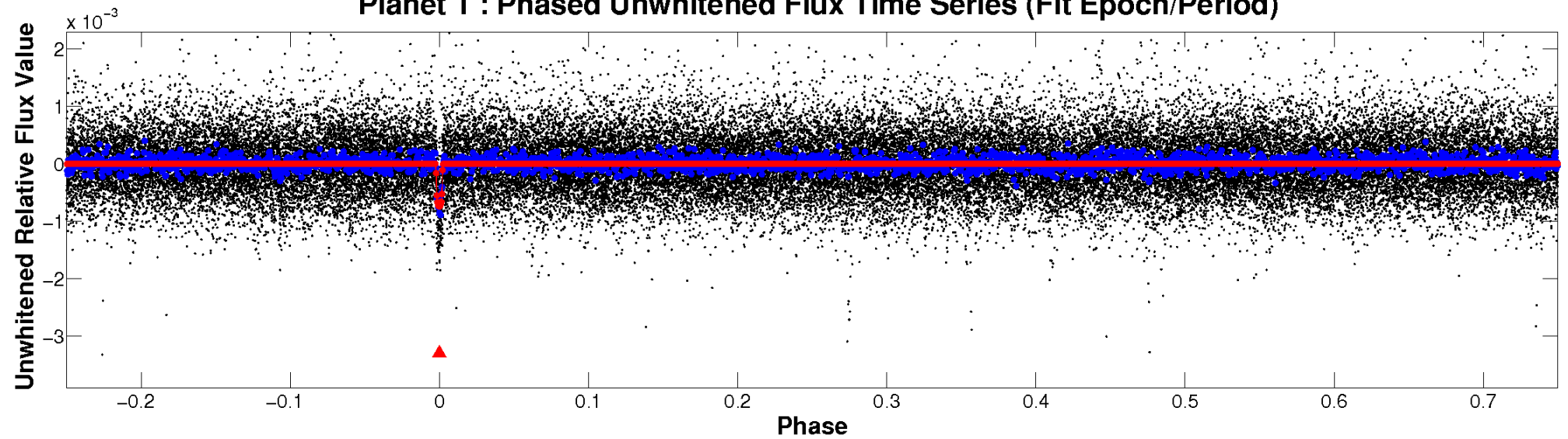
TCE 006779726-01



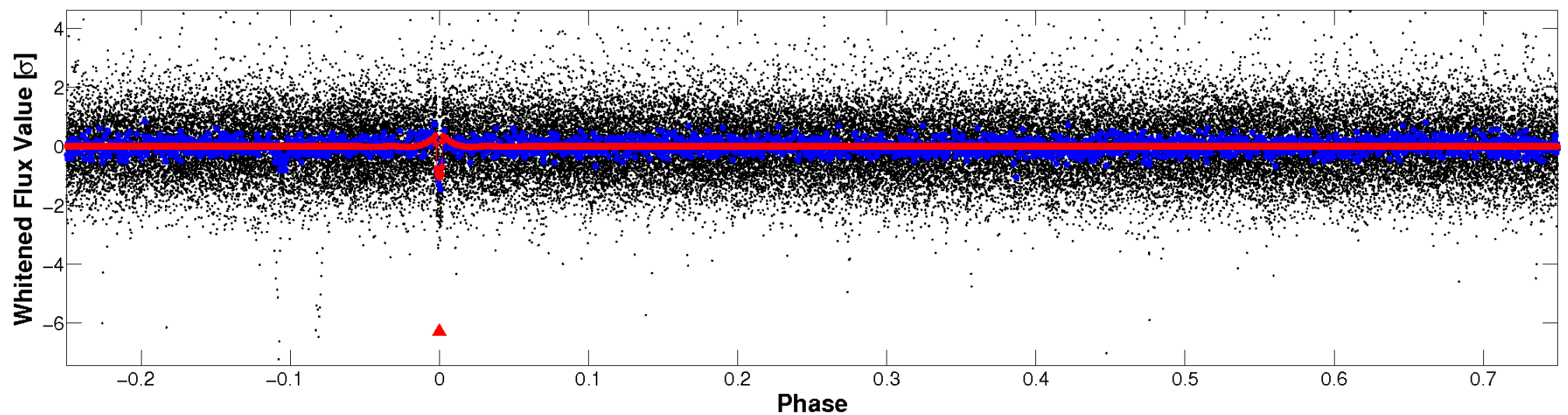


# Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

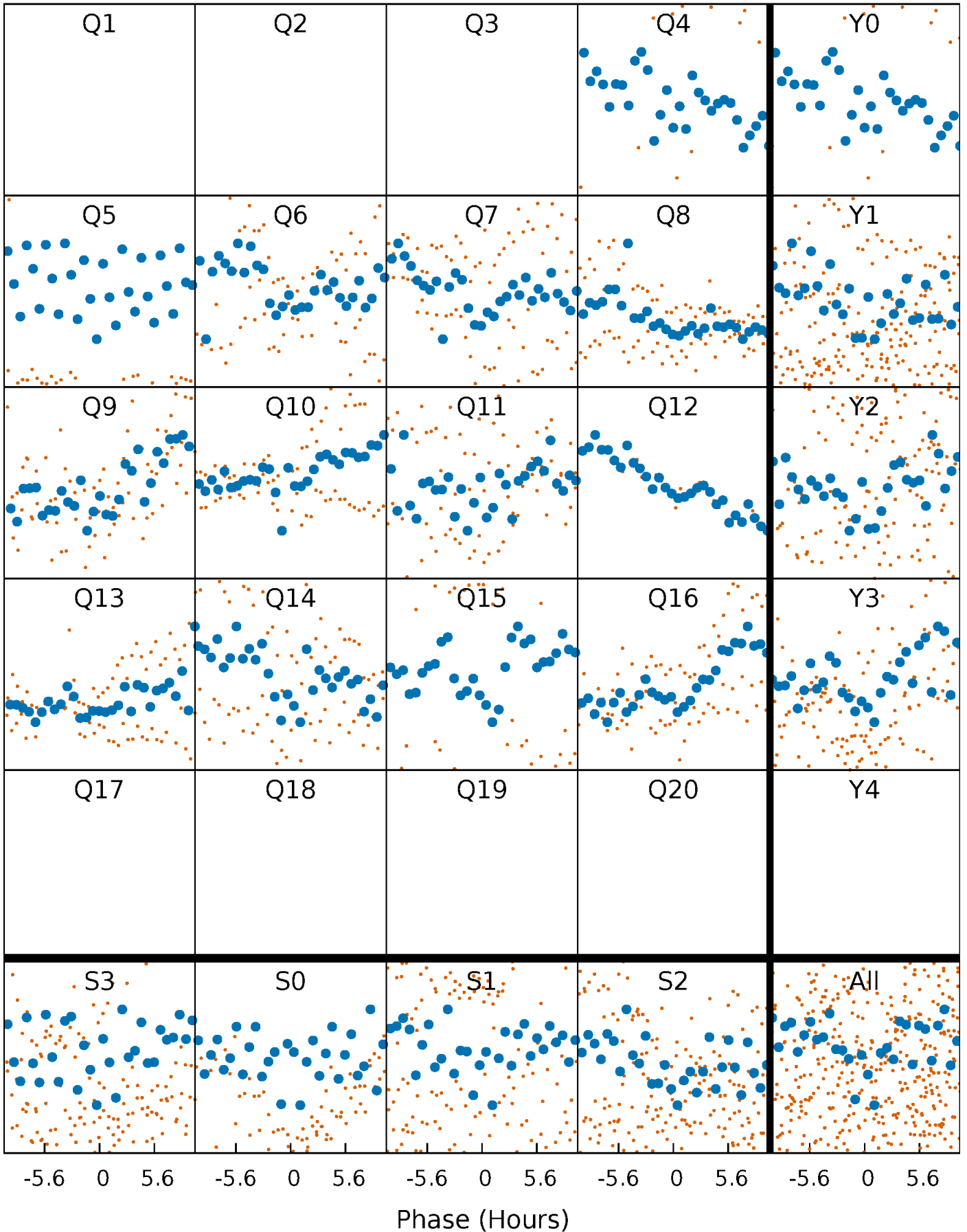


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

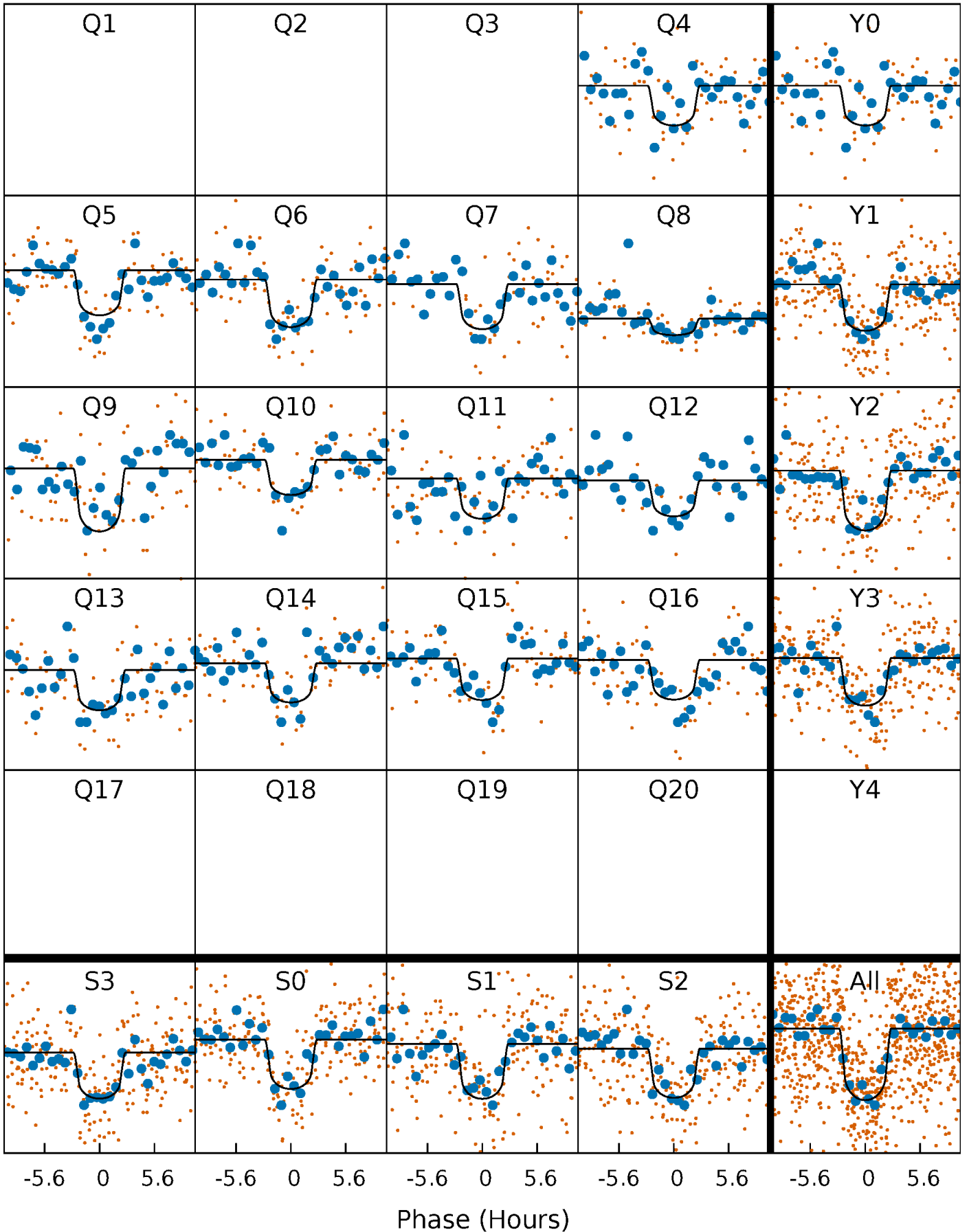
TCE 006779726-01 P= 47.056397 Days  $T_0=173.963807$  (BKJD)





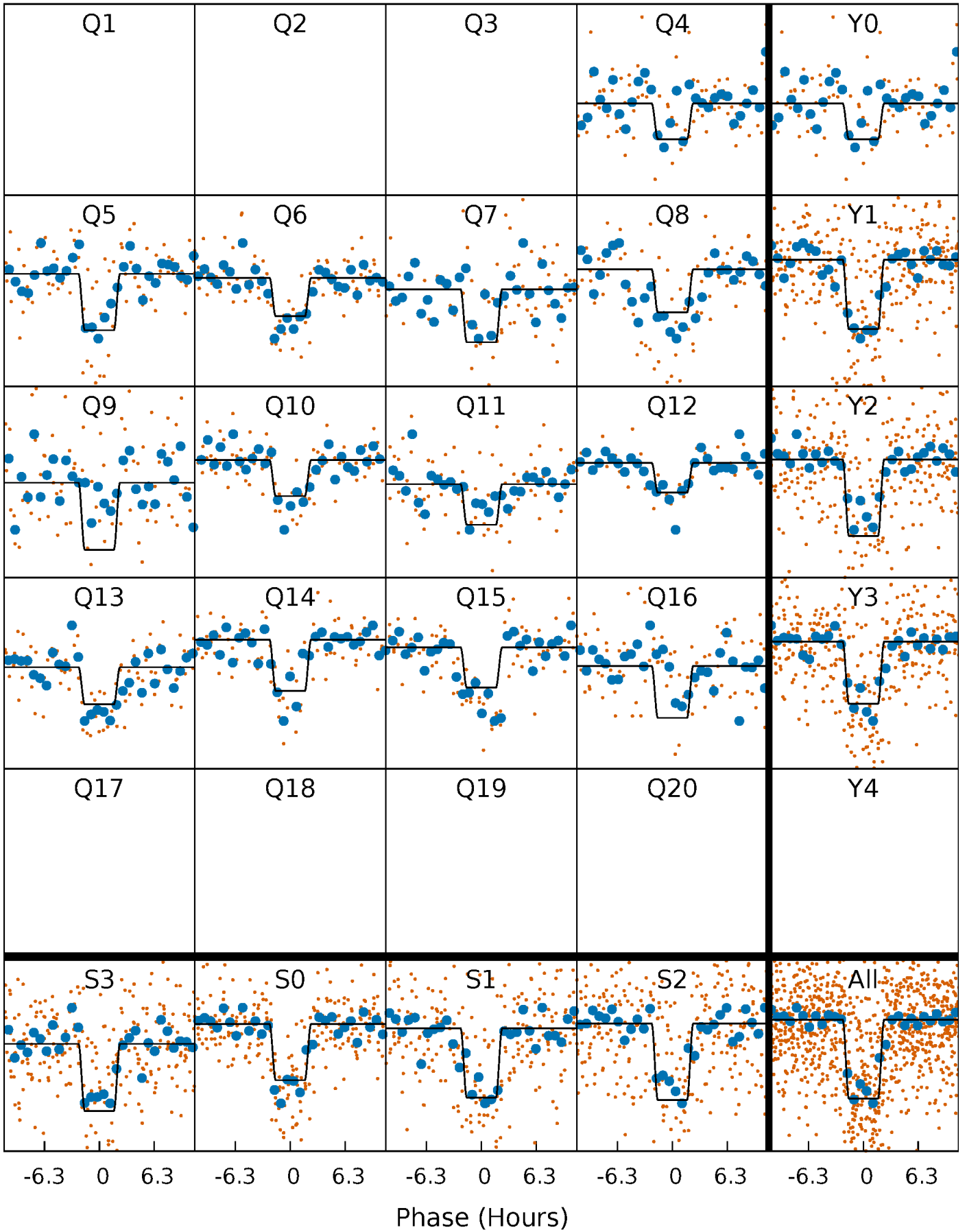
# DV Quarter-Phased Transit Curves

TCE 006779726-01 P= 47.056397 Days  $T_0=173.963807$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

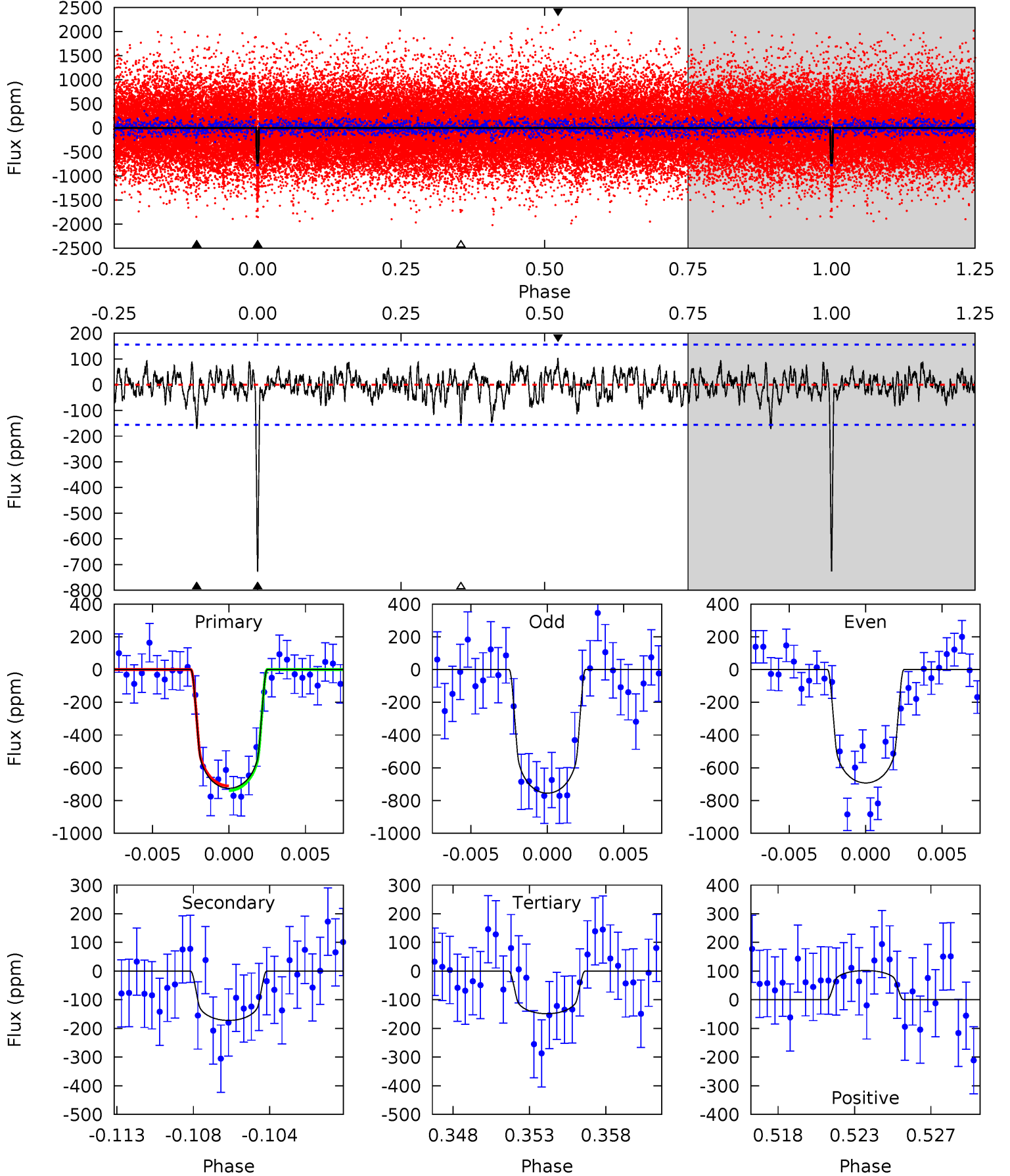
TCE 006779726-01 P= 47.056309 Days  $T_0=173.961556$  (BKJD)



# DV Model-Shift Uniqueness Test

006779726-01,  $P = 47.056397$  Days,  $E = 173.963807$  Days

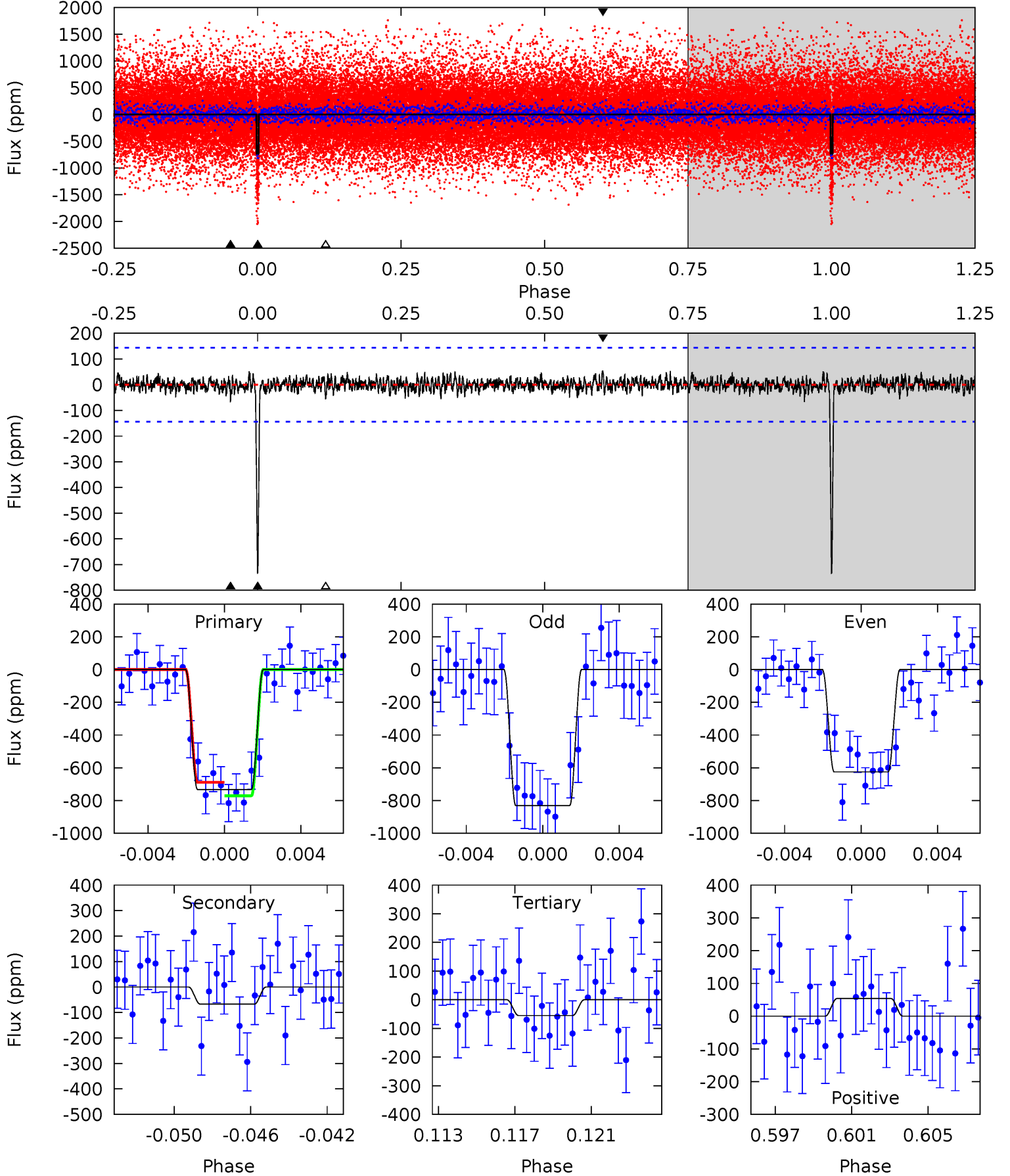
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	5.70	4.93	3.38	5.17	2.83	1.32	19.1	20.6	0.78	2.33	1.04	0.97	0.12	0.47



# Alt Model-Shift Uniqueness Test

006779726-01,  $P = 47.056309$  Days,  $E = 173.961556$  Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	2.43	1.99	1.94	5.19	2.86	0.62	24.4	24.5	0.44	0.49	3.72	0.86	0.07	1.48



### Stellar Parameters For KIC 006779726

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5889^{+186}_{-206}$	$4.492^{+0.065}_{-0.208}$	$-0.160^{+0.300}_{-0.300}$	$0.924^{+0.268}_{-0.115}$	$0.967^{+0.120}_{-0.120}$	$1.728^{+0.478}_{-0.902}$
	+3%/-3%	+1%/-5%	+188%/-188%	+29%/-12%	+12%/-12%	+28%/-52%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 006779726-01 / KOI 3375.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-172 \pm 30$	$2.87^{+1.26}_{-1.20}$	$708^{+53}_{-37}$	$4293^{+1130}_{-506}$	$721^{+1428}_{-389}$
Alt.	$-67 \pm 28$	$2.99^{+1.37}_{-1.22}$	$708^{+61}_{-41}$	$3602^{+740}_{-462}$	$255^{+503}_{-149}$

$T_{max}$  = Theoretical Maximum Planetary Temperature  
 $T_{obs}$  = Observed Planetary Temperature (Assuming A=0.3)  
 $A_{obs}$  = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if  $T_{obs} \gg T_{max}$  AND  $A_{obs} \gg 1.0$

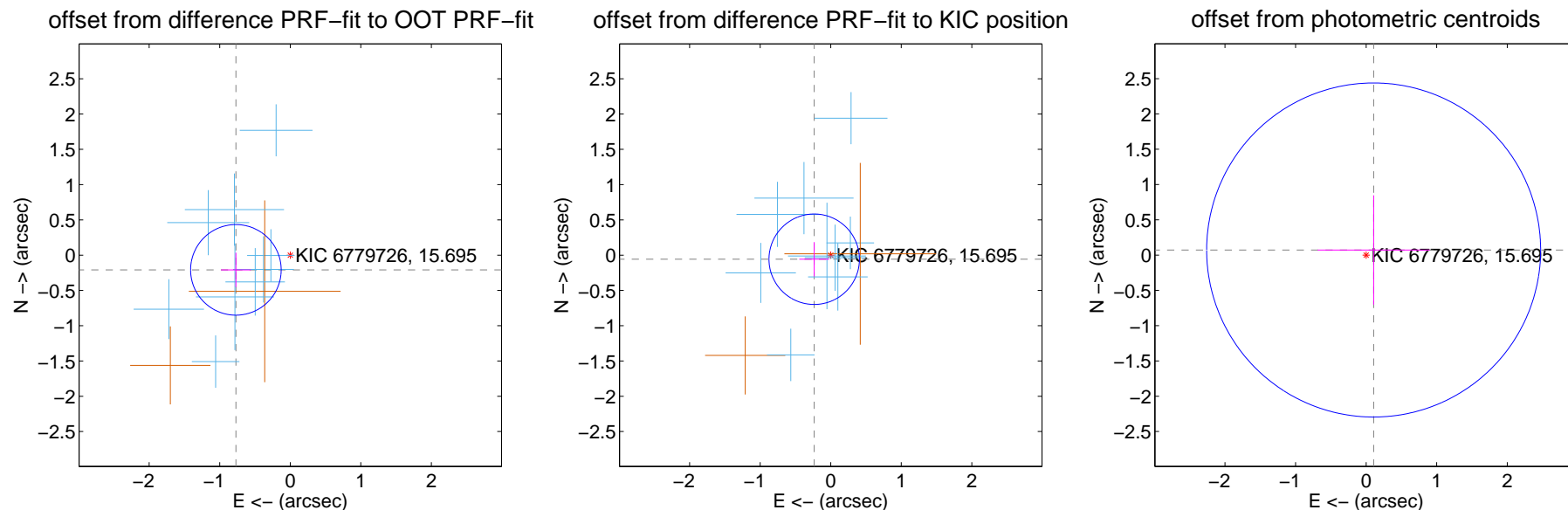
## DV Centroid Data

Supplemental centroid analysis for 006779726-01. Kepler magnitude: 15.70. Transit SNR 14.90

There are 9 quarters with good PRF difference image offsets

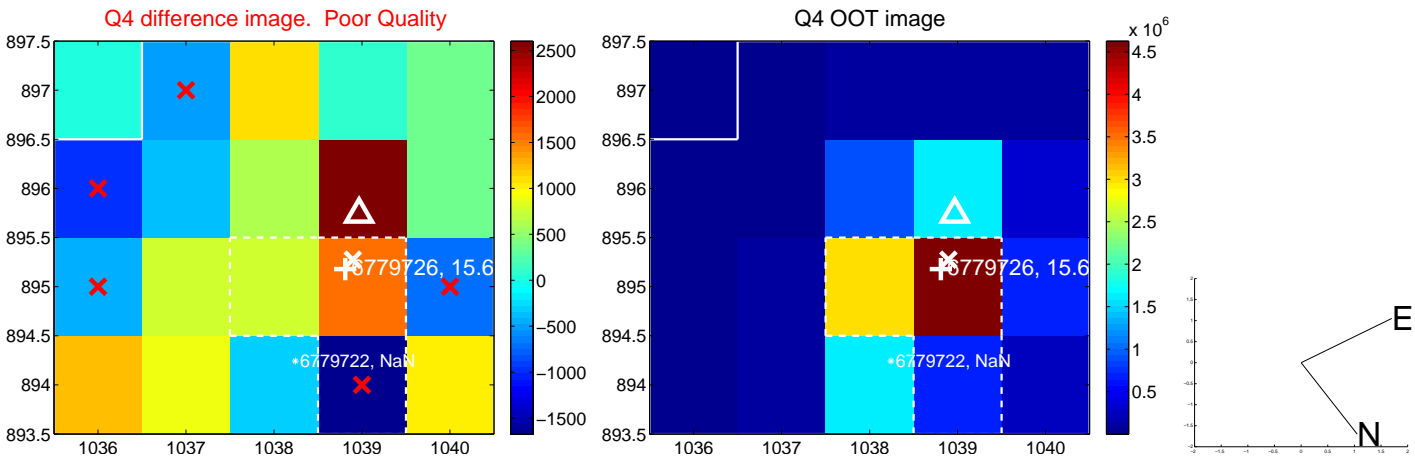
The direct PRF centroid is offset from the target star catalog position by about 0.89 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>0.799 \pm 0.214</math></b>	<b>3.73</b>	$0.771 \pm 0.212$	$-0.209 \pm 0.243$
PRF-fit source offset from KIC position	$0.241 \pm 0.214$	1.13	$0.234 \pm 0.212$	$-0.058 \pm 0.243$
photometric centroid source offset	$0.13 \pm 0.79$	0.16	$-0.11 \pm 0.80$	$0.07 \pm 0.78$



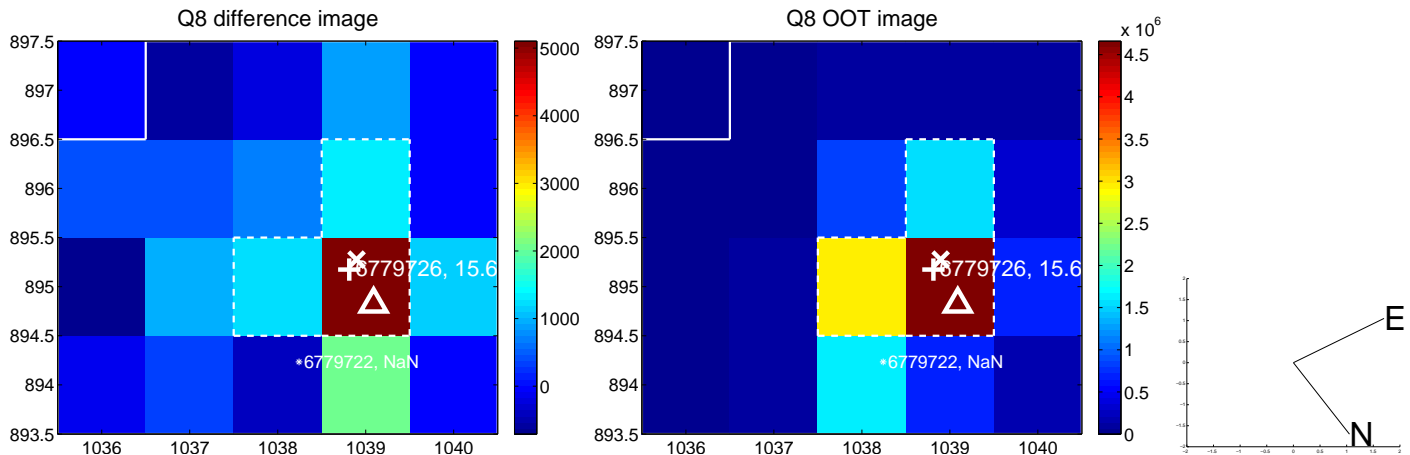
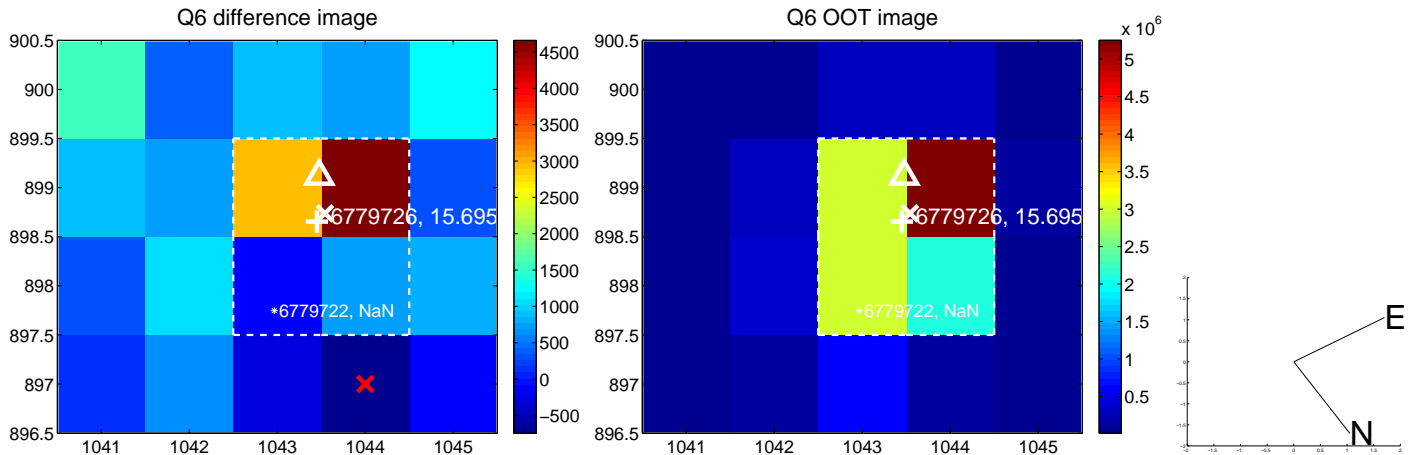
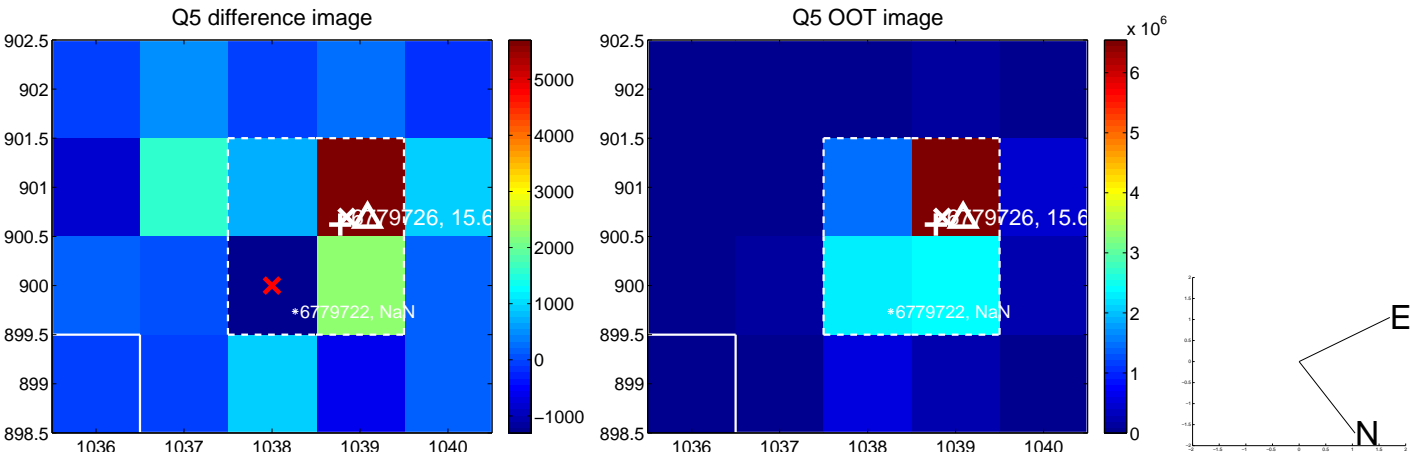
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value

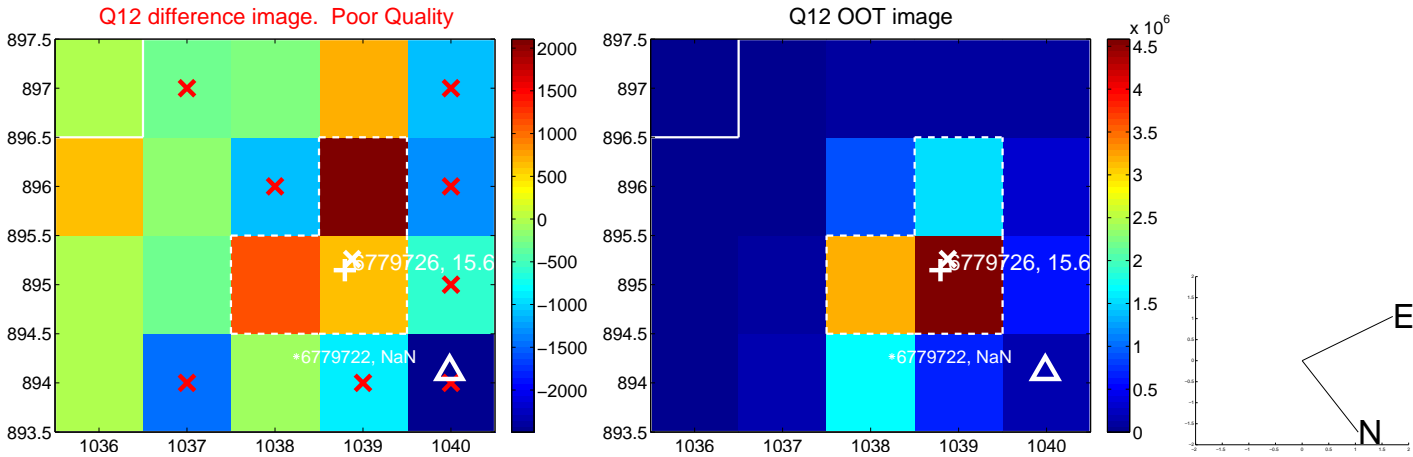
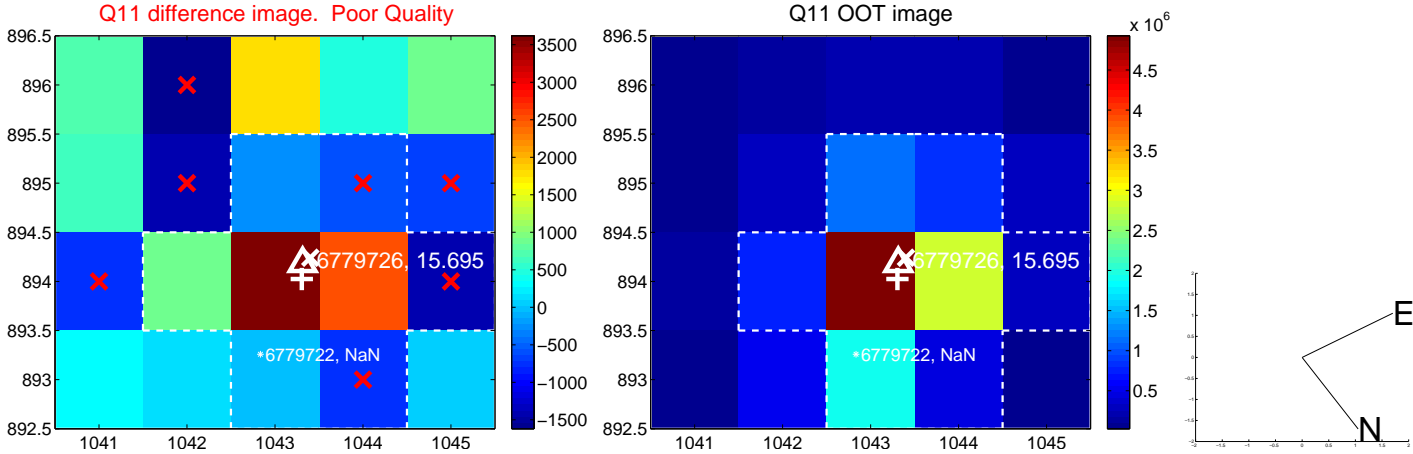
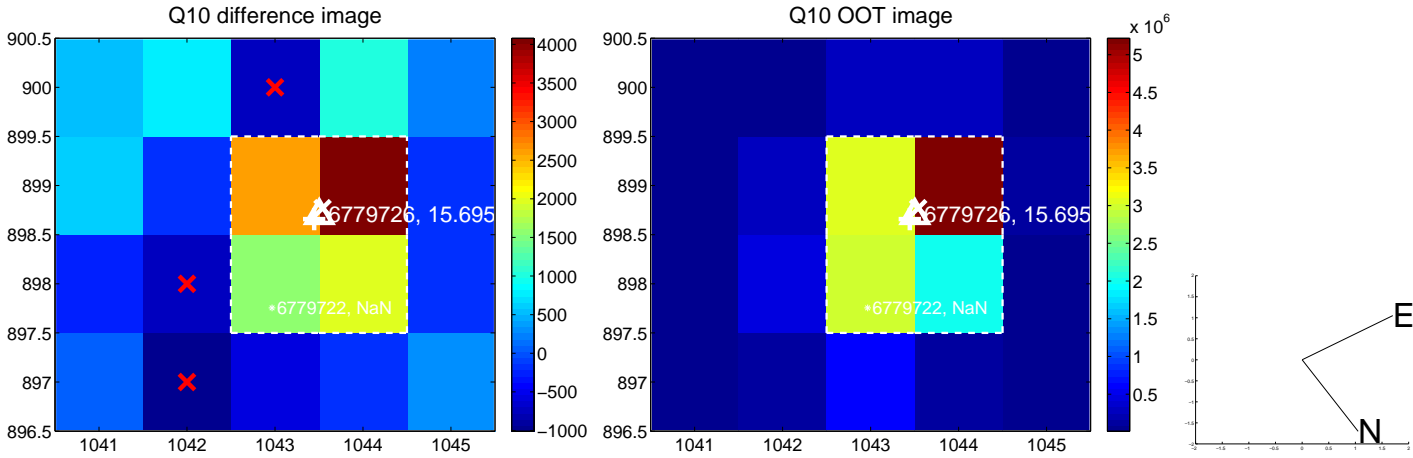
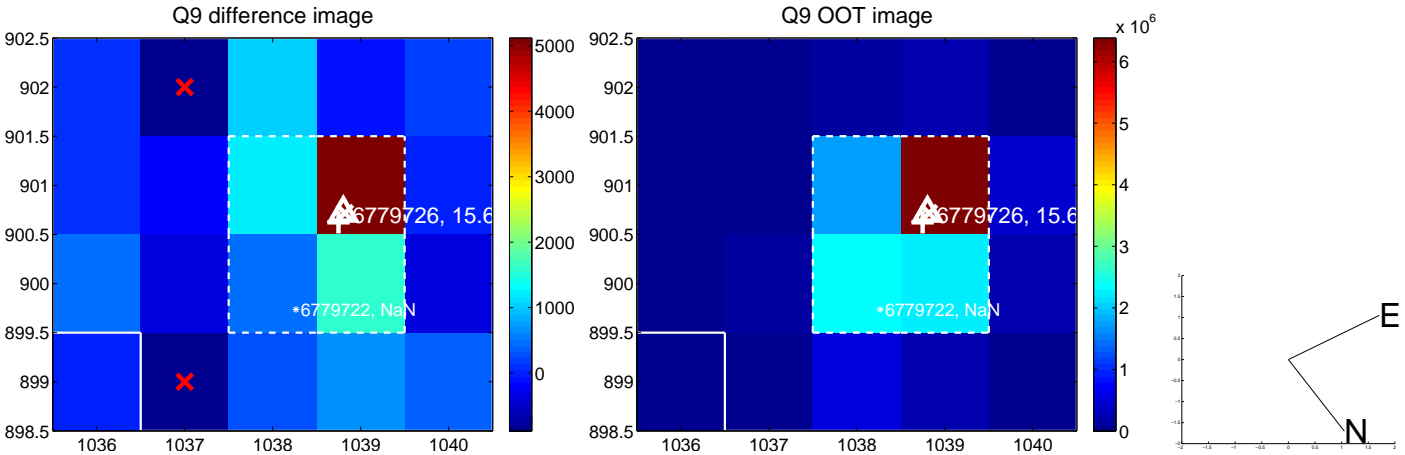




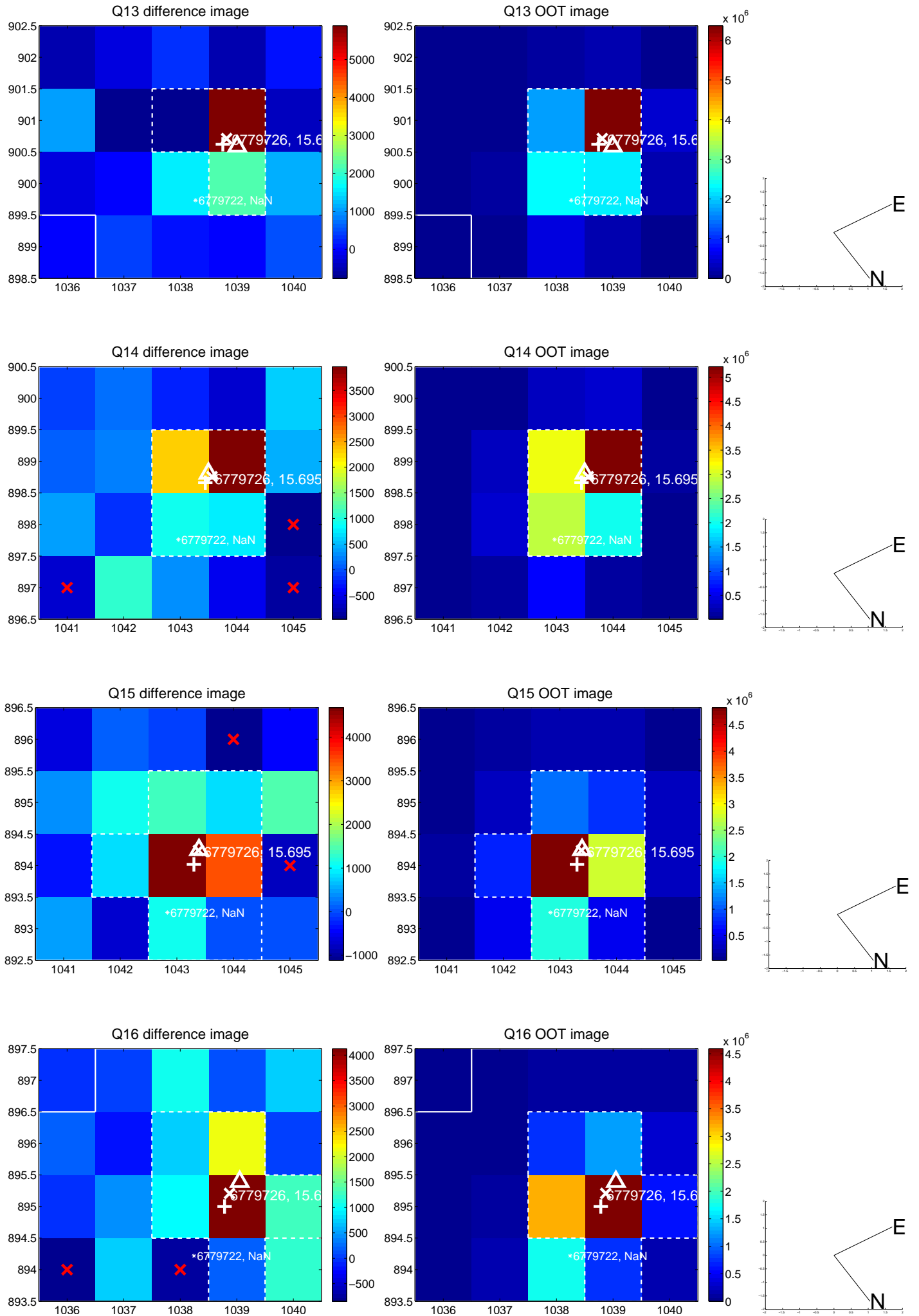
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



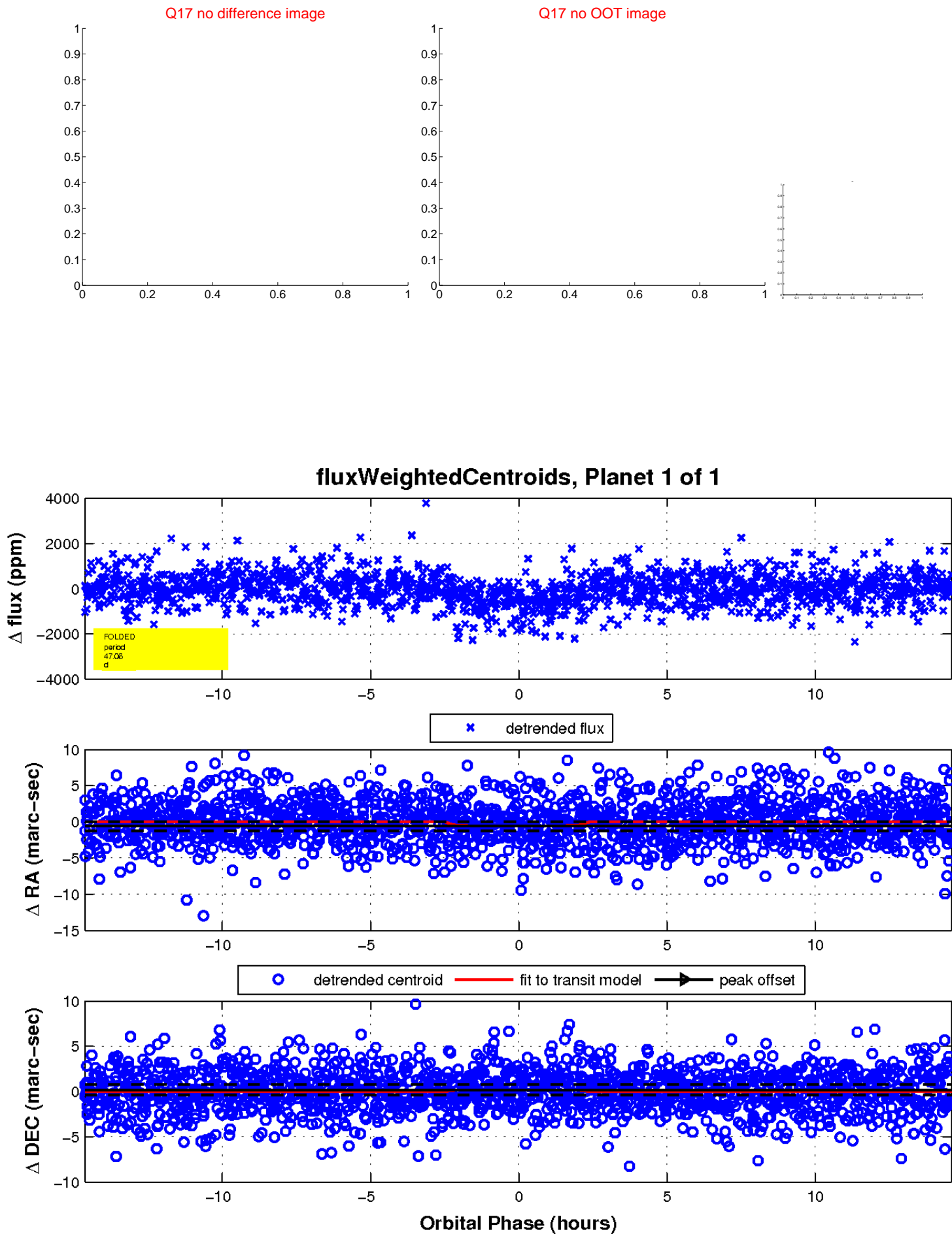
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

